

problem (3)

$$mmf_1 = \frac{N i_1}{2} \cos \theta$$

$$mmf_2 = \frac{N i_2}{2} \cos (\theta - 90)$$

same (N)

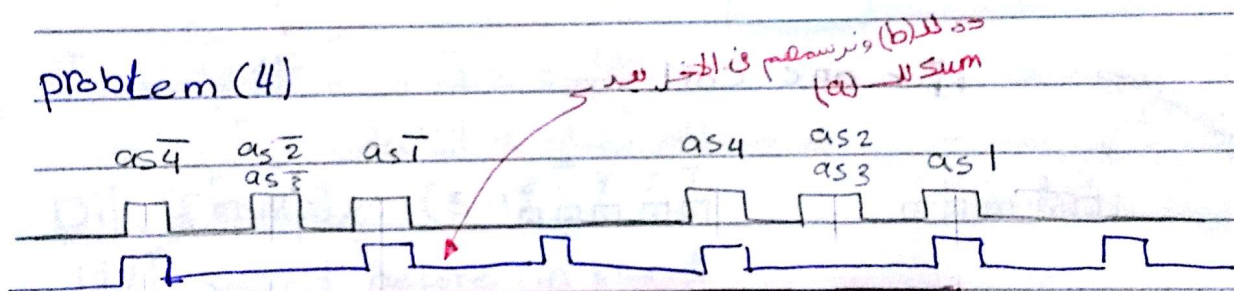
$$mmf_T = \frac{N i_1}{2} \cos \theta + \frac{N i_2}{2} \cos (\theta - 90)$$

$$= \frac{N I_m}{2} \cos \omega t \cos \theta + \frac{N I_m}{2} \cos (\omega t - 90) \cos (\theta - 90)$$

as N for both coils is equal, as I_m equal for both

$$= \frac{N I_m}{2} \frac{1}{2} [\cos (\omega t + \theta) + \cos (\omega t - \theta) + \cos (\omega t + \theta - 180) + \cos (\omega t - \theta)]$$

problem (4)



Coil ①

Coil ② ③

(2) →

Coil ④

sum

إذا طلب في الامتحان mmf الكلية . بعد ما نرسم mmfat
ونرسم mmbt جمع الرسمتين مع بعض